PATENT

Docket No.:

UIOWA-0052

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Johna LEDDY and Chaminda HETTIGE

Group Art Unit: 1754

Serial No.:

10/687,918

: Examiner: EXAMINER

Filed:

October 20, 2003

: Customer No.: 34610

For:

MAGNETICALLY MODIFIED ELECTRODES CONTAINING AT LEAST

ONE CATALYST COMPONENT THAT MEDIATES A SUBATOMIC PARTICLE

TRANSFER PROCESS

INFORMATION DISCLOSURE STATEMENT

U.S. Patent and Trademark Office 2011 South Clark Place Customer Window Crystal Plaza Two, Lobby, Room 1B03 Arlington, Virginia 22202

Sir:

Pursuant to 37 C.F.R. 1.56, the attention of the Patent and Trademark Office is hereby directed to the reference(s) listed on the attached PTO-1449. One copy of each reference is attached. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the reference(s) be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

Applicants have listed publication dates on the attached PTO-1449 based on information presently available to the undersigned. However, the listed publication dates should not be construed as an admission that the information was actually published on the indicated date. Applicant reserves the right to establish the patentability of the claimed invention over any of the information provided herewith, and/or to prove that this information may not be enabling for the teachings purportedly offered. This statement should not be construed as a representation that a search has been made, that information cited in the statement is considered to be and/or is material to patentability, or that information more material to the examination of the present patent application does not exist. The Examiner is specifically requested not to rely solely on the material submitted herewith. It is further understood that the Examiner will consider information that was cited or submitted to the U.S. Patent and Trademark Office in a prior application relied on under 35 U.S.C. §120. 1138 OG 37, 38 (May 19, 1992).

- 1. This Information Disclosure Statement is being filed (i) within three months of the U.S. filing date of a U.S. application other than a CPA continued prosecution application under §1.53(d) OR (ii) within three months of the date of entry of the national stage as set forth in §1.491 in an international application OR (iii) before the mailing date of a first Office Action on the merits. No certification or fee is required. 37 C.F.R. §1.97(b).
 - 2. This Information Disclosure Statement is being filed more than three months after the U.S. filing date AND after the mailing date of the first Office Action on the merits, but before the mailing date of a Final Rejection OR Notice of Allowance OR an action that otherwise closes prosecution in the application. 37 C.F.R. §1.97(c).
 - a. I hereby state that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart

foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(1).

- b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(2).
- __ c. Attached is our check no. ____ in the amount of \$180.00 in payment of the fee under 37 C.F.R. 1.17(p). Please credit or debit Deposit Account No. 16-0607 as needed to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached.
- 3. This Information Disclosure Statement is being filed after the mailing date of a Final Rejection OR Notice of Allowance OR an action that otherwise closes prosecution in the application, but on or before payment of the Issue Fee. Attached is our check no. ____ in the amount of \$180.00 in payment of the fee under 37 C.F.R. 1.17(p). Please credit or debit Deposit Account No. 16-0607 as needed to ensure consideration of the disclosed information. Two duplicate copies of this paper are attached. 37 C.F.R. §1.97(d).
 - a. I hereby state that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(1).
 - Learning b. I hereby state that no item of information in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to my knowledge after making reasonable inquiry, was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement. 37 C.F.R. 1.97(e)(2).
 - 4. Others:
- X 5. To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted, FLESHNER & KIM, LLP

Donald R. McPhail Registration No. 35,811 Steven I. Helmer

Steven J. Helmer Registration No. 40,475

Chantilly, Virginia 20153-1200 703 766-3701

Date: March 23, 2004

P.O. Box 221200

DRM\SJH:dcp

Please direct all correspondence to Customer Number 34610

ATTY. DOCKET NO. APPLN. SERIAL NO. **UIOWA-0052** 10/687,918 LIST OF PRIOR ART CITATOR APPLICANT(S) APPLICANT Johna LEDDY and Chaminda HETTIGE CUSTOMER NO. 34610 (PTO-1449) **GROUP FILING DATE** October 20, 2003 1754 U.S. PATENT DOCUMENTS **EXAMINER'S** *ISSUE FILING *INVENTOR NAME **SUBCLASS INITIALS** *PATENT NO. DATE CLASS DATE 5,422,246 06/06/95 KOOPAL et al. 435 14 06/14/93 20 6,615,078 B1 09/02/03 BURSON et al. 604 04/21/00 5,208,154 05/04/93 WEAVER et al. 435 176 04/08/91 4,613,541 09/23/86 **ISODA** 428 212 12/31/85 4,711,245 12/08/87 HIGGINS et al. 128 635 05/07/84 5,391,272 02/21/95 O'DALY et al. 204 153.12 03/08/94 6,071,392 06/06/00 YAMAMOTO et al. 204 403 06/03/98 03/29/94 204 5,298,144 **SPOKANE** 403 09/15/92 5,011,786 51 04/30/91 ISODA et al. 437 06/23/89 U.S. PATENT APPLICATION PUBLICATIONS *PATENT APPLN. PUB. NO. *PUB. DATE *APPLICANT **CLASS SUBCLASS** 2003/0104119A1 06/05/03 WILSON et al. 427 2.1 11/21/01 2003/0175803A1 09/18/03 TSIONSKY et al. 435 7.1 09/10/02 **U.S. PATENT APPLICATIONS** *FILING *APPLN. NO. DATE *INVENTOR **CLASS SUBCLASS FOREIGN PATENT DOCUMENTS EXAMINER'S** Translation **INITIALS** PATENT NO. DATE COUNTRY **CLASS SUBCLASS** Yes No WO 02/01228A2 01/03/02 WIPO WO00/43783 07/27/00 **WIPO** JP62215861A2 09/22/87 Japan (Full Japanese Text) Abst WO02/47246A1 06/13/02 **WIPO** JP63010562A2 01/18/88 Japan (Full Japanese Text) OTHER ART (Including Author, Title, Date, Pertinent Pages, Publisher, Place of Publication, Etc.) C. Hettige et al., "Electron Transfer Rate Enhancement of Myoglobin in Magnetic Fields," 202nd Meeting of the Electrochemical Society (October 21, 2002) p. 1. L.A. Zook, "Morphological Modification of Nafion for Improved Electrochemical Flux," Thesis, December 1996, pp. 1-134. H. Pan et al., "Effect of magnetization treatment on the electrochemical properties of La_{0.9}Sm_{0.1}Ni_{2.0}Co_{3.0} electrode alloy," J. Alloys and Compounds, Vol. 327, 2001, pp. 136-140. **EXAMINER DATE CONSIDERED**

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(PTO-1449)

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

ATTY. DOCKET NO. APPLN. SERIAL NO. UIOWA-0052 10/687,918 LIST OF PRIOR ART CITED BY APPLICANT(S) **APPLICANT** Johna LEDDY and Chaminda HETTIGE CUSTOMER NO. 34610 (PTO-1449) **GROUP** FILING DATE October 20, 2003 1754 U.S. PATENT DOCUMENTS **EXAMINER'S** *ISSUE **FILING** *PATENT NO. **SUBCLASS** DATE *INVENTOR NAME CLASS DATE **INITIALS** 3,409,471 11/05/68 F.V. STURM et al. 06/18/64 3,811,952 05/21/74 SIWERSSON et al. 136 86 A 06/20/73 136 86 D 3,853,628 12/10/74 **FOX** 07/26/73 4,037,022 07/19/77 **CHERON** 429 10 05/06/76 428 4,201,827 05/06/80 **HEITKAMP** 283 11/23/77 LEDDY et al. 204 290 R 06/06/96 5,871,625 02/16/99 6,322,676 B1 11/27/01 LEDDY et al. 204 296 03/25/98 429 6,303,242 B1 10/16/01 LEDDY et al. 10 12/10/99 290 R 5,817,221 10/06/98 LEDDY et al. 204 02/05/96 U.S. PATENT APPLICATION PUBLICATIONS *PATENT APPLN. PUB. NO. *PUB. DATE **CLASS** *APPLICANT **SUBCLASS** 2002/0155476A1 10/24/02 POURMAND et al. 10/19/01 435 6 U.S. PATENT APPLICATIONS *FILING *APPLN. NO. DATE *INVENTOR **CLASS SUBCLASS FOREIGN PATENT DOCUMENTS EXAMINER'S** Translation **INITIALS** PATENT NO. DATE COUNTRY CLASS **SUBCLASS** Yes JP2001155746 06/08/01 Japan (Full Japanese Text) Abst OTHER ART (Including Author, Title, Date, Pertinent Pages, Publisher, Place of Publication, Etc.) Alexander H. Tullo, "Maintaining A Charge," C&EN Northeast News Bureau, July 15, 2002, pp. 25-26. Nicholas J. Turro et al., "Magnetic Field and Magnetic Isotope Effects in Organic Photochemical Reactions. A Novel Probe of Reaction Mechanisms and a Method for Enrichment of Magnetic Isotopes," Acc. Chem. Res., 1980, Vol. 13, pp. 369-377. M. Feng et al., "Raman Spectroscopic and Electrochemical Characterization of Myoglobin Thin Film: Implication of the Role of Histidine 64 for Fast Heterogeneous Electron Transfer," J. Am. Chem. Soc., Vol. 123, No. 13, April 4, 2001, pp. 3013-3020. A.F. Nassar et al., "Catalytic Reduction of Organohalide Pollutants by Myoglobin in a Biomembranelike Surfactant Film," J. Am. Chem. Soc., Vol. 117, No. 44, November 8, 1995, pp. 10986-10993. **EXAMINER DATE CONSIDERED**

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U.S. PATENT DOCUMENTS EXAMINER'S *ISSUE **FILING** CLASS **SUBCLASS** *PATENT NO. DATE *INVENTOR NAME DATE INITIALS U.S. PATENT APPLICATION PUBLICATIONS *PATENT APPLN. PUB. NO. *PUB. *APPLICANT CLASS **SUBCLASS** DATE **U.S. PATENT APPLICATIONS** *APPLN. *FILING CLASS **SUBCLASS** *INVENTOR DATE NO. FOREIGN PATENT DOCUMENTS Translation **EXAMINER'S SUBCLASS INITIALS** PATENT NO. DATE COUNTRY CLASS OTHER ART (Including Author, Title, Date, Pertinent Pages, Publisher, Place of Publication, Etc.) Jianxin Ma et al., "New method to improve the electrochemical properties of hydrogen storage electrode alloy," SciFinder Scholar, Jinshu Xuebao, 2001, 37(1), pp. 57-60 (Abstract only). V.I. Markarov et al., "Magnetic properties of powders, and their electrochemical activity," SciFinder Scholar, Tr. Novocherkassk. Politekh. Inst., 1970, 208, pp. 100-103 (Abstract only). Masahiro Yamaguchi et al., "Effect of a magnetic field on the emf. of a Ni-MH secondary battery," Tohoku Daigaku Kinzoku Zairyo Kenkyusho Kyojiba Chodendo Zairyo Kenkyu Senta Nenji Hokoku, 1992, 329-333 (Abstract only). DATE CONSIDERED **EXAMINER**

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